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Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~A conductive component for an electromechanical cell comprising a metal part having a doped coating in the form of~~ A product comprising two spaced apart fuel cell bipolar plates, each bipolar plate having gas flow channels and a doped coating deposited on the bipolar plate, the doped coating comprising at least one of a doped diamond coating and or a doped diamond-like coating, and further comprising an electrolyte membrane interposed between the two spaced apart fuel cell bipolar plates.

2. (Currently Amended) ~~A component~~ product in accordance with claim 1, said doped coating being doped with foreign atoms comprising one of foreign atoms of the main groups of the periodic table of elements, foreign atoms of the side groups of the periodic table of elements and foreign atoms belonging to the rare earths of the periodic table of elements.

3. (Currently Amended) ~~A component~~ product in accordance with claim 1, said doped coating being doped with at least one of ~~the elements~~ Ti, W, or Au.

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4. (Currently Amended) A ~~component~~ product in accordance with claim 1, said doped coating being doped with at least one of ~~the elements~~ B, Sc, Y, Nb, V, Fe, Cr, Ni, Mn, Zr, Mo, Ta, Hf, Pt, Pd, Re, Ru, Rh, Ir, or Ag.

5. (Currently Amended) A ~~component~~ product in accordance with claim 3, said doped coating having between more than 0% and 35% foreign atoms.

6. (Currently Amended) A ~~component~~ product in accordance with claim 3, said doped coating having between more than 0% and 35% foreign atoms.

7. (Currently Amended) A ~~component~~ product in accordance with claim 4, said doped coating having between more than 0% and 35% foreign atoms.

8. (Currently Amended) A ~~component~~ product in accordance with claim 4, said doped coating having between 10 and 20% foreign atoms.

9. (Currently Amended) A ~~component~~ product in accordance with claim 1, said doped coating having a layer thickness above 0 μm and below 10 μm .

10. (Currently Amended) A ~~component~~ product in accordance with claim 1, said doped coating having a layer thickness in the range from 1 nm to 150 nm.

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11. (Currently Amended) A ~~component~~ product in accordance with claim 1, said metal part ~~being formed of a metal selected from the group comprising at least one of~~ titanium, stainless steel, steel, steel with no additional alloying element, aluminum, magnesium ~~and~~ or an alloy of any of the foregoing.

12. (Currently Amended) A ~~component~~ product in accordance with claim 1 in the form of a bipolar plate of a fuel cell.

13. (Withdrawn) A method for the manufacture of a conductive component comprising a metal part having a doped coating in the form of at least one of a doped diamond coating and a doped diamond-like carbon coating, wherein said coating is produced by at least one of a CVD and/or a PVD process.

14. (Withdrawn) A method in accordance with claim 13, wherein said process at least includes a CVD process carried out with plasma assistance.

15. (Withdrawn) A method in accordance with claim 13, wherein said process at least includes a PVD process carried out with plasma assistance.

16. (Withdrawn) A method in accordance with claim 13, wherein said at least one process involves the use of at least one reactive gas including carbon as a component thereof for the deposition of said coating.

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17. (Withdrawn) A method in accordance with claim 16, said carbon for said doped coating being available in full by said at least one reactive gas.

18. (Withdrawn) A method in accordance with claim 13, said method comprising the step of providing a dopant for said doped coating as a component of said at least one process.

19. (Withdrawn) A method in accordance with claim 18, said dopant being made available as a component of said at least one reactive gas used to form said doped coating.

20. (Withdrawn) A method in accordance with claim 18 and comprising the step of providing said dopant from a target material comprising said dopant by releasing said dopant from said target material during a PVD process.

21. (Withdrawn) A method in accordance with claim 13, said at least one process being carried out in a reaction chamber at a pressure of 0.1 to 50000 Pa in said reaction chamber.

22. (Currently Amended) ~~Use of a component in accordance with claim 1 in an electrochemical cell.~~ A product as set forth in claim 1 further comprising a cathode on one side of the electrolyte membrane and an anode on another side of the electrolyte membrane.

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23. (Currently Amended) ~~Use of a component in accordance with claim 1 as a bipolar plate in a fuel cell.~~ A product as set forth in claim 1 wherein each bipolar plate comprises an intrinsically corrosion resistant and conductive metal.

24. (Currently Amended) ~~Use of a component in accordance with claim 1 as a bipolar plate in a fuel cell selected from one of the following kinds of fuel cells: PEMFC (Proton Exchange Membrane), DMFC (Direct Methanol Fuel Cell), SOFC (Solid Oxide Fuel Cell), MCFC (Molten Carbide Fuel Cell), PAFC (Phosphoric Acid Fuel Cell) and AFC (Alkaline Fuel Cell).~~ A product as set forth in claim 23 wherein the intrinsically corrosion resistant and conductive metal comprises stainless steel.

25. (Currently Amended) ~~A coating of metal part for an electrochemical cell~~
A product comprising a coating over an intrinsically corrosion resistant and conductive fuel cell bipolar plate having gas flow passages formed therein and gas supply openings and gas discharge openings, said coating comprising at least one of a doped diamond coating and or a doped diamond-like carbon coating.

26. (Currently Amended) ~~A coating product in accordance with claim 25, said doped coating being doped with at least one element selected from the group comprising of: Ti, W, Au, B, Sc, Y, Nb, V, Fe, Cr, Ni, Mn, Zr, Mo, Ta, Hf, Pt, Pd, Re, Ru, Rh, Ir, or Ag.~~

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27. (Currently Amended) A ~~coating~~ product in accordance with claim 25 ~~when~~
~~provided on a~~ wherein the bipolar plate for a fuel cell comprises stainless steel.